

RAW SEQUENCE LISTING

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Application Serial Number: 10/637,710
Source: IFW
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DATE: 03/18/2005

PATENT APPLICATION: US/10/637,710

TIME: 17:27:17

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3 <110> APPLICANT: Panda, Satchidananda
4   Hogenesch, John B.
5   Provincio, Ignacio
6   Kay, Steve A.
7   IRM LLC
8   Uniformed Services University of the Health Sciences
10 <120> TITLE OF INVENTION: Methods for Treating Circadian Rhythm Phase
11   Disturbances
13 <130> FILE REFERENCE: 021288-001020US
15 <140> CURRENT APPLICATION NUMBER: US 10/637,710
16 <141> CURRENT FILING DATE: 2003-08-08
18 <150> PRIOR APPLICATION NUMBER: US 60/402,570
19 <151> PRIOR FILING DATE: 2002-08-08
21 <150> PRIOR APPLICATION NUMBER: US 60/482,384
22 <151> PRIOR FILING DATE: 2003-06-25
24 <160> NUMBER OF SEQ ID NOS: 12
26 <170> SOFTWARE: PatentIn Ver. 2.1
28 <210> SEQ ID NO: 1
29 <211> LENGTH: 2137
30 <212> TYPE: DNA
31 <213> ORGANISM: Mus sp.
33 <220> FEATURE:
34 <223> OTHER INFORMATION: mouse melanopsin cDNA
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39 agccggaagt ctggggaccg atccctgac tttccatggc cttagctcct ctgagagcct 180
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41 cacaaccagt cctgccctgc aaggcatttg gaacggcact cagaacgtct ccgtaagagc 300
42 ccagctttct tctgttagcc ccacgacatc tgcacatcag gctgctgcct ggggtccctt 360
43 cccacagtc gatgtcccag accatgctca ctatacccta ggcacgggtga tctgtctggt 420
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58 ccagcacctg ccttgccctg ggggtgcttct cgggtgatca ggccagcgca gccacccttc 1320
59 cctcagctac cgctctaccc accgctccac attgagcagc cagtcctcag acctcagctg 1380
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62 tcagaaccta gaagatggag aactcaaggc ctcttcacgc cccaggtac agagatctaa 1560
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68 tataacttat gtgcccttga agatatgtgg cctacagcag agaacaactc atgctgtgtg 1920
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70 acagagtgtg atggtgttca cctctctgcg cgggttttga tgctgggcaa acacggggaa 2040
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75 <210> SEQ ID NO: 2

76 <211> LENGTH: 521

77 <212> TYPE: PRT

78 <213> ORGANISM: Mus sp.

80 <220> FEATURE:

81 <223> OTHER INFORMATION: mouse melanopsin

83 <400> SEQUENCE: 2

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90 Gln Asn Val Ser Val Arg Ala Gln Leu Leu Ser Val Ser Pro Thr Thr
91 35 40 45
93 Ser Ala His Gln Ala Ala Ala Trp Val Pro Phe Pro Thr Val Asp Val
94 50 55 60
96 Pro Asp His Ala His Tyr Thr Leu Gly Thr Val Ile Leu Leu Val Gly
97 65 70 75 80
99 Leu Thr Gly Met Leu Gly Asn Leu Thr Val Ile Tyr Thr Phe Cys Arg
100 85 90 95
102 Asn Arg Gly Leu Arg Thr Pro Ala Asn Met Phe Ile Ile Asn Leu Ala
103 100 105 110
105 Val Ser Asp Phe Leu Met Ser Val Thr Gln Ala Pro Val Phe Phe Ala
106 115 120 125
108 Ser Ser Leu Tyr Lys Lys Trp Leu Phe Gly Glu Thr Gly Cys Glu Phe
109 130 135 140
111 Tyr Ala Phe Cys Gly Ala Val Phe Gly Ile Thr Ser Met Ile Thr Leu
112 145 150 155 160
114 Thr Ala Ile Ala Met Asp Arg Tyr Leu Val Ile Thr Arg Pro Leu Ala
115 165 170 175
117 Thr Ile Gly Arg Gly Ser Lys Arg Arg Thr Ala Leu Val Leu Leu Gly
118 180 185 190
120 Val Trp Leu Tyr Ala Leu Ala Trp Ser Leu Pro Pro Phe Phe Gly Trp

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127 225          230          235          240
129 Phe Val Phe Phe Leu Pro Leu Leu Ile Ile Phe Cys Tyr Ile Phe
130          245          250          255
132 Ile Phe Arg Ala Ile Arg Glu Thr Gly Arg Ala Cys Glu Gly Cys Gly
133          260          265          270
135 Glu Ser Pro Leu Arg Gln Arg Arg Gln Trp Gln Arg Leu Gln Ser Glu
136          275          280          285
138 Trp Lys Met Ala Lys Val Ala Leu Ile Val Ile Leu Leu Phe Val Leu
139          290          295          300
141 Ser Trp Ala Pro Tyr Ser Thr Val Ala Leu Val Ala Phe Ala Gly Tyr
142 305          310          315          320
144 Ser His Ile Leu Thr Pro Tyr Met Ser Ser Val Pro Ala Val Ile Ala
145          325          330          335
147 Lys Ala Ser Ala Ile His Asn Pro Ile Ile Tyr Ala Ile Thr His Pro
148          340          345          350
150 Lys Tyr Arg Val Ala Ile Ala Gln His Leu Pro Cys Leu Gly Val Leu
151          355          360          365
153 Leu Gly Val Ser Gly Gln Arg Ser His Pro Ser Leu Ser Tyr Arg Ser
154          370          375          380
156 Thr His Arg Ser Thr Leu Ser Ser Gln Ser Ser Asp Leu Ser Trp Ile
157 385          390          395          400
159 Ser Gly Arg Lys Arg Gln Glu Ser Leu Gly Ser Glu Ser Glu Val Gly
160          405          410          415
162 Trp Thr Asp Thr Glu Thr Thr Ala Ala Trp Gly Ala Ala Gln Gln Ala
163          420          425          430
165 Ser Gly Gln Ser Phe Cys Ser Gln Asn Leu Glu Asp Gly Glu Leu Lys
166          435          440          445
168 Ala Ser Ser Ser Pro Gln Val Gln Arg Ser Lys Thr Pro Lys Val Pro
169          450          455          460
171 Gly Pro Ser Thr Cys Arg Pro Met Lys Gly Gln Gly Ala Arg Pro Ser
172 465          470          475          480
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175          485          490          495
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190 <223> OTHER INFORMATION: human melanopsin cDNA
192 <400> SEQUENCE: 3
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196 caaccacaaga gccagctgc atggccaccc cagcaccacc cagctggtgg gacagctccc 240
197 agagcagcat ctccagcctg ggccggcttc catccatcag tcccacagca cctgggactt 300
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199 tgggcacagt gatcttgctg gtgggactca cggggatgct gggcaacctg acggtcatct 420
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201 cggtcagcga cttcctcatg tccttcaccc agggccctgt cttcttcacc agtagcctct 540
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206 tgcccgaggg gttgttgaca tctgtctcct gggactacat gagcttcacg ccggccgtgc 840
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234 <210> SEQ ID NO: 4

235 <211> LENGTH: 478

236 <212> TYPE: PRT

237 <213> ORGANISM: Homo sapiens

239 <220> FEATURE:

240 <223> OTHER INFORMATION: human melanopsin

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256 65          70          75          80
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262          100          105          110
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271 145          150          155          160
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282 Trp Ser Ala Tyr Val Pro Glu Gly Leu Leu Thr Ser Cys Ser Trp Asp
283 210          215          220
285 Tyr Met Ser Phe Thr Pro Ala Val Arg Ala Tyr Thr Met Leu Leu Cys
286 225          230          235          240
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292          260          265          270
294 Gly Ala Cys Lys Gly Asn Gly Glu Ser Leu Trp Gln Arg Gln Arg Leu
295          275          280          285
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309 Thr His Pro Lys Tyr Arg Val Ala Ile Ala Gln His Leu Pro Cys Leu
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312 Gly Val Leu Leu Gly Val Ser Arg Arg His Ser Arg Pro Tyr Pro Ser
313          370          375          380
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